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Erratum

Linker-Gating Ring Complex as Passive Spring and Ca^{2+}-Dependent Machine for a Voltage- and Ca^{2+}-Activated Potassium Channel

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In this paper, which appeared in *Neuron* volume 42, pp. 745–756 (June 10, 2004), there was an error in Equation A4. The distance the gate moves in this equation should be the entire closed to open distance b and not the time averaged distance of 0.5 b. The corrected equations become

$$\Delta G_R = 0.5K_R[(D_C - b)^2 - D_C^2] \quad \text{A4}$$

$$\Delta G = 0 = \Delta G_I - zeV_{0.5} + 0.5K_R[(D_C - b)^2 - D_C^2] \quad \text{A5}$$

$$\Delta G = 0 = \Delta G_I - zeV'_{0.5} + 0.5K_R[(D_C - \Delta L - b)^2 - (D_C - \Delta L)^2] \quad \text{A6}$$

$$V'_{0.5} - V_{0.5} = \Delta LK_R b/ze \quad \text{A7}$$

$$K_R = (14\ \text{mV/amino acid})\ ze/b \quad \text{A8}$$

The error does not change any of the findings or conclusions of the paper, except for the estimated magnitude of the spring constant. The corrected spring constant, K_R, for the linker gating ring complex becomes 2.7 pN per amino acid change in length of all four linkers. If each amino acid added or deleted from the linkers changes the length of each linker by either 0.35 or 0.15 nm, then the corrected spring constants become 7.7 pN/nm and 18 pN/nm, respectively, for the complete linker gating ring complex that includes the four linkers acting in parallel.

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